Listing of Claims

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

1. (currently amended) A medical image diagnosing support apparatus comprising:

a first extraction means which extracts a body region of a subject from a tomographic image of the subject acquired by a medical tomographic apparatus;

a second extraction means which extracts a non-adipose region from the body region and sets a line surrounding the non-adipose region;

a third extraction means which extracts a total body adipose region from the body region;

a separation means which separates the total body adipose region into a visceral adipose region and a subcutaneous adipose region based on ~~positional information~~ whether a specified region is located inside or outside of the line surrounding the non-adipose region; and

a display control means which controls display of the tomographic image on an image display device with clear indication of the visceral adipose region and the subcutaneous adipose region.

2. (original) The medical image diagnosing support apparatus according to claim 1, wherein the second extraction means extracts the non-adipose region by performing threshold processing of a pixel value in the tomographic image.

3. (original) The medical image diagnosing support apparatus according to claim 2, wherein the second extraction means sequentially searches for a pixel value range usually

provided by the non-adipose region, and sets a threshold range of the threshold processing based

on the most frequent pixel value in the pixel value range.

4. (previously presented) The medical image diagnosing support apparatus according to

claim 2, wherein the second extraction means performs peripheral edge recognition processing of

the non-adipose region, sets a plurality of attention points on a recognized peripheral edge, and

interpolates spaces between the plurality of attention points by higher order spline interpolation

to extract an outline of the non-adipose region, wherein the separation means separates the total

body adipose region into a visceral adipose region and a subcutaneous adipose region based on

the outline of the non-adipose region extracted.

5. (original) The medical image diagnosing support apparatus according to claim 1,

further comprising an epidermal tissue layer removal means which removes an epidermal tissue

layer in the non-adipose region,

wherein the third extraction means extracts the total body adipose region from the body

region from which the epidermal tissue layer is removed by the epidermal tissue layer removal

means.

6. (original) The medical image diagnosing support apparatus according to claim 1,

wherein the third extraction means extracts the total body adipose region by subtracting the non-

adipose region from the body region.

7. (previously presented) The medical image diagnosing support apparatus according to

claim 1, further comprising a determination means which determines whether the tomographic

image is suitable for body adipose measurement,

wherein the display control means controls to display a determination result by the

determination means on the image display device.

8.   (original) The medical image diagnosing support apparatus according to claim 7,

wherein when the determination means obtains error information that the tomographic image is

not obtained from a site suitable for body adipose measurement of the subject or not acquired by

a predetermined medical tomographic apparatus, the display control means controls to display

the error information on the image display device.

9.   (previously presented) The medical image diagnosing support apparatus according to

claim 1, further comprising an area ratio calculation means which calculates area ratios of the

total body adipose region, the visceral adipose region, and the subcutaneous adipose region,

wherein the display control means controls to display the area ratios calculated by the

area ratio calculation means on the image display device.

10.   (original) The medical image diagnosing support apparatus according to claim 9,

further comprising a print output means which prints and outputs the tomographic image and the

area ratios controlled to be displayed on the image display device by the display control means.

11.   (currently amended) A medical image diagnosing support method comprising:

a first extraction step of extracting a body region of a subject from a tomographic image

of the subject acquired by a medical tomographic apparatus;

a second extraction step of extracting a non-adipose region from the body region <u>and</u>

<u>setting a line surrounding the non-adipose region</u>;

a third extraction step of extracting a total body adipose region from the body region;

a separation step of separating the total <u>body</u> adipose region into a visceral adipose

region and a subcutaneous adipose region based on ~~positional information~~ <u>whether a specified</u>

<u>region is located inside or outside</u> of <u>the line surrounding</u> the non-adipose region; and

a display control step of controlling display of the tomographic image on an image

display device with clear indication of the visceral adipose region and the subcutaneous adipose

region.

12. (original) The medical image diagnosing support method according to claim 11,

wherein threshold processing of a pixel value is performed in the tomographic image to extract

the non-adipose region in the second extraction step.

13. (original) The medical image diagnosing support method according to claim 12,

wherein a pixel value range usually provided by the non-adipose region is sequentially searched

for, and a threshold range of the threshold processing is set based on the most frequent pixel

value in the pixel value range in the second extraction step.

14. (original) The medical image diagnosing support method according to claim 12,

wherein peripheral edge recognition processing of the non-adipose region is performed, a

plurality of attention points are set on a recognized peripheral edge, and spaces between the

plurality of attention points are interpolated by higher order spline interpolation to extract an outline of the non-adipose region in the second extraction step.

15. (original) The medical image diagnosing support method according to claim 11, further comprising an epidermal tissue layer removal step of removing an epidermal tissue layer in the non-adipose region,

wherein the total body adipose region are extracted from the body region from which the epidermal tissue layer is removed by the epidermal tissue layer removal means in the third extraction step.

16. (original) The medical image diagnosing support method according to claim 11, wherein in the third extraction step, the total body adipose region are extracted by subtracting the non-adipose region from the body region.

17. (previously presented) The medical image diagnosing support method according to claim 11, further comprising a determination step of determining whether the tomographic image is suitable for body adipose measurement,

wherein a determination result by the determination step is controlled to be displayed on the image display device in the display control step.

18. (original) The medical image diagnosing support method according to claim 17, wherein when error information that the tomographic image is not obtained from a site suitable for body adipose measurement of the subject or not acquired by a predetermined medical

tomographic apparatus is obtained in the determination step, the error information is controlled

to be displayed on the image display device in the display control step.

19. (previously presented) The medical image diagnosing support method according to

claim 11, further comprising an area ratio calculation step of calculating area ratios of the total

body adipose region, the visceral adipose region, and the subcutaneous adipose region,

wherein the area ratios calculated by the area ratio calculation means are controlled to be

displayed on the image display device in the display control step.

20. (original) The medical image diagnosing support method according to claim 19,

further comprising a print output step of printing and outputting the tomographic image and the

area ratios controlled to be displayed on the image display device in the display control step.

21. (previously presented) A medical image diagnosing support apparatus according to

claim 1, wherein the separation means extracts a region between a contracted circumscribed

circle and a muscle region as the subcutaneous adipose region, when the circumscribed circle,

which circumscribes the body region divided radially into predetermined numbers having the

barycenter of the body region as the center, is contracted until the circle circumscribes the

muscle region which is extracted by performing threshold processing to the body region.

22. (previously presented) The medical image diagnosing support apparatus according

to claim 1 further comprising means for extracting a navel region of the subject from the

tomographic image of the subject, wherein the separation means extracts a region where muscle

and bone region are removed as the subcutaneous adipose region from a portion of the body

region included in a circular area of interest in which a radius of the circular area is half of a

distance between a first attention point set at a peripheral edge of the non-adipose region and a

second attention point set at middle point of each partial region of the muscle and bone region

included in the regions where the navel region is removed from the extracted body region.

        23. (currently amended) The medical image diagnosing support apparatus according to

claim 7 further comprising a ~~comprising a~~ means for extracting the navel region of the subject

from the tomographic image of the subject, wherein the determination means determines that the

tomographic image is suitable for body adipose measurement when [[the]] an air region is

within a predetermined ratio and when the navel region is included in the extracted non-adipose

region.